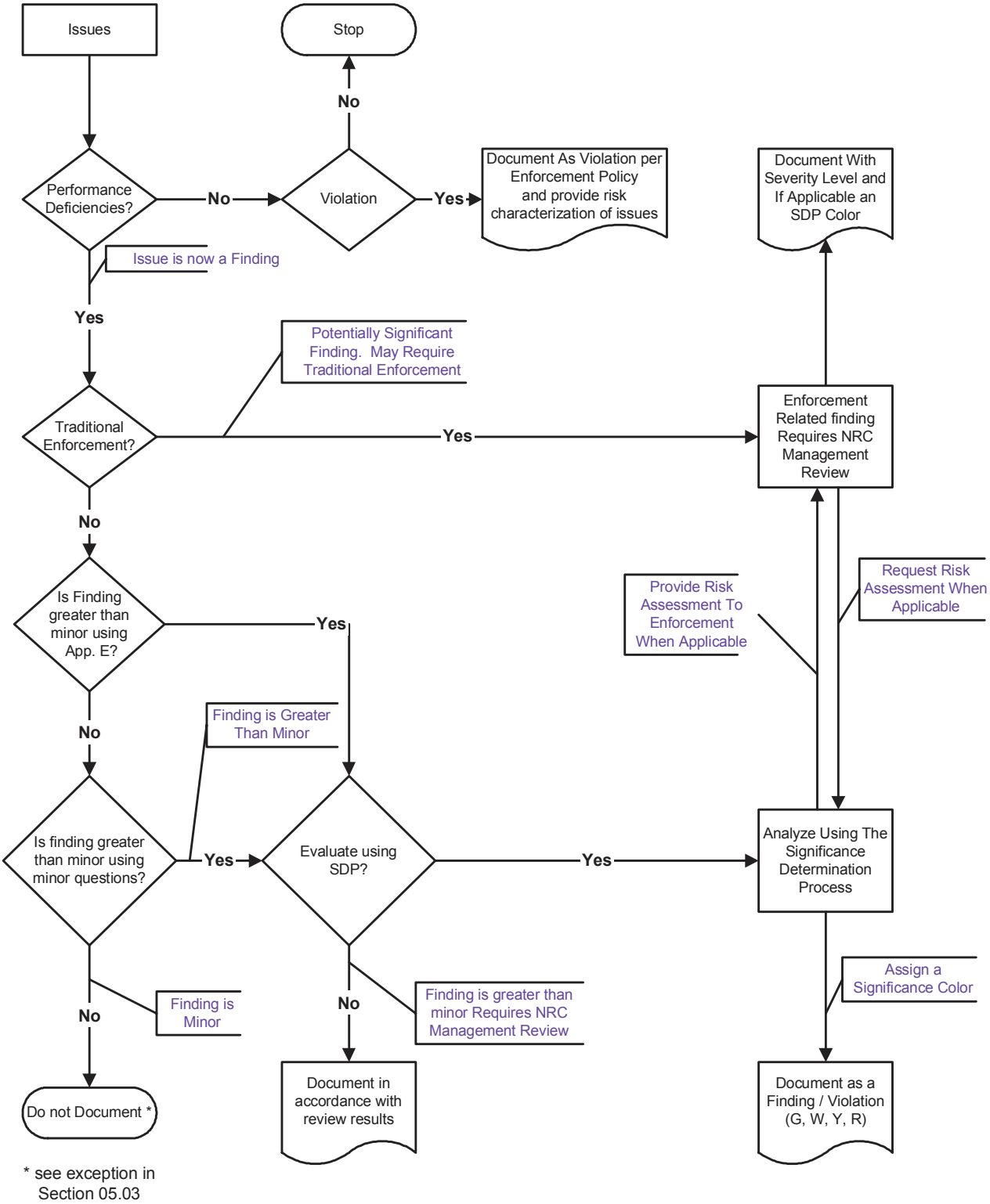
APPENDIX B
Issue Screening

Use Figure 1 and the questions listed below to determine if a finding has sufficient significance to warrant further analysis or documentation.

Figure 1



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**Section 1. Performance Deficiency Question**

An issue must be a "performance deficiency" before it can be considered a finding.

Did the licensee fail to meet a requirement or a standard, where the cause was reasonably within the licensee's ability to foresee and correct and which should have been prevented?

Licensee does not have to be committed to a standard in order to determine whether there is a performance deficiency (PD). For example, a PD is determined to exist if the licensee fails to adhere to a widely accepted industry standard.

**Section 2. Traditional Enforcement Questions**

(1) Does the issue have actual safety consequence (e.g., overexposure, actual radiation release greater than 10 CFR Part 20 limits)?

(2) Does the issue have the potential for impacting the NRC's ability to perform its regulatory function? For example, a failure to provide complete and accurate information or failure to receive NRC approval for a change in licensee activity, or failure to notify NRC of changes in licensee activities, or failure to perform 10 CFR 50.59 analyses etc. (see Enforcement Policy IV.A.3).

(3) Are there any willful aspects of the violation?

**Section 3. Minor Questions** (A finding should be compared to Appendix E examples to determine if it matches a minor example. If not, then answer the following questions to determine if the finding is more than minor.)

(1) Could the finding be reasonably viewed as a precursor to a significant event?

(2) If left uncorrected would the finding become a more significant safety concern?

(3) Does the finding relate to a performance indicator (PI) that would have caused the PI to exceed a threshold?

(4) Is the finding associated with one of the cornerstone attributes listed at the end of this attachment and does the finding affect the associated cornerstone objective?

(5) Does the finding relate to any of the following maintenance risk assessment and risk management issues?

(a) Licensee risk assessment failed to consider risk significant SSCs and support systems (included in Table 2 of the plant specific Phase 2 SDP

risk-informed inspection notebook) that were unavailable during the maintenance.

(b) Licensee risk assessment failed to consider unavailable SSCs such as Residual Heat Removal Systems (PWR and BWR) that prevent or mitigate Interfacing System LOCAs.

(c) Licensee risk assessment failed to consider SSCs that prevent containment failure such as containment isolation valves (BWR & PWR), BWR drywell/containment spray/containment flooding systems, and PWR containment sprays and fan coolers.

(d) Licensee risk assessment failed to consider unusual external conditions that are present or imminent (e.g, severe weather, offsite power instability).

(e) Licensee risk assessment failed to consider maintenance activities that could increase the likelihood of initiating events such as work in the electrical switchyard (increasing the likelihood of a loss of offsite power) and RPS testing (increasing the likelihood of a reactor trip).

(f) Licensee risk assessment failed to consider the uncompensated removal or impairment of plant internal flood barriers.

(g) Licensee risk assessment failed to account for any unavailability of a single train of a system (primary or back-up) that provides a shutdown key safety function.

(h) Licensee's risk assessment has known errors or incorrect assumptions that has the potential to change the outcome of the assessment.

(I) Licensee failed to implement any prescribed significant compensatory measures or failed to effectively manage those measures.

## Section 4. SDP Questions

REACTOR SAFETY

CORNERSTONES — Initiating Events, Mitigating Systems, & Barrier Integrity

(1) Is the finding associated with an increase in the likelihood of an initiating event?

(2) Is the finding associated with the operability, availability, reliability, or function of a system or train in a mitigating system?

(3) Is the finding associated with the integrity of fuel cladding, the reactor coolant system, reactor containment, control room envelope, auxiliary building (PWR), or standby gas treatment system (BWR)?

(4) Is the finding associated with degraded conditions that could concurrently influence any mitigation equipment and an initiating event?

(5) Is the finding associated with or involve impairment or degradation of a fire protection feature?

(6) Is the finding associated with the spent fuel pool cooling system radiological barrier?

(7) Is the finding associated with inadequate 10 CFR 50.65 (a)(4) risk assessment (quantitative only) and/or risk management?

Emergency Planning:
(1) Is the finding associated with a failure to meet or implement a regulatory requirement?

(2) Is the finding associated with a drill or exercise critique problem?

(3) Is the finding associated with an actual event implementation problem?

Operator Requalification:
(1) Is the finding related to licensee's grading of exams?

(2) Is the finding related to written exams?

(3) Is the finding related to an individual operating test?

(4) Is the finding related to simulator fidelity?

(5) Is the finding related to simulator scenario quality?

(6) Is the finding related to scenario security?

(7) Is the finding related to crew performance?

(8) Is the finding related to operator pass/fail rate?

(9) Is the finding related to operator license conditions?

RADIATION SAFETY

CORNERSTONE — Occupational Radiation Safety (ALARA):
(1) Does the occurrence involve a failure to maintain or implement, to the extent practical, procedures or engineering controls, needed to achieve occupational doses that are ALARA[1], and that resulted in unplanned, unintended occupational collective dose for a work activity?

[1] (2) Does the occurrence involve an individual worker(s) unplanned, unintended dose(s) that resulted from actions or conditions contrary to licensee procedures, radiation work permit, technical specifications or NRC regulations?

(3) Does the occurrence involve an individual worker(s) unplanned, unintended dose(s) or potential of such a dose (resulting from actions or conditions contrary to licensee procedures, radiation work permit, technical specifications or NRC regulations) which could have been significantly greater as a result of a single minor, reasonable alteration of the circumstances?

(4) Does the occurrence involve conditions contrary to licensee procedures, technical specifications or NRC regulations which impact radiation monitors, instrumentation and/or personnel dosimetry, related to measuring worker dose?

CORNERSTONE — Public Radiation Safety

(1) Does the finding involve an occurrence in the licensee's radiological effluent monitoring program that is contrary to NRC regulations or the licensee's TS, Offsite Dose Calculation Manual (ODCM), or procedures?

(2) Does the finding involve an occurrence in the licensee's radiological environmental monitoring program that is contrary to NRC regulations or the licensee's TS, ODCM, or procedures?

(3) Does the finding involve an occurrence in the licensee's radioactive material control program that is contrary to NRC regulations or the licensee's procedures?

(4) Does the finding involve an occurrence in the licensee's radioactive material transportation program that is contrary to NRC or Department of Transportation (DOT) regulations or licensee procedures?

SAFEGUARDS

CORNERSTONE — Physical Protection

(1) Is the finding associated with or involve a failure to meet the requirements of 10 CFR 73.55 (b)-(h), or associated plans, procedures, orders, or rules?

[1] "Yes" answer to this question does not necessarily indicate a violation of the requirement in 10 CFR Part 20.1101 (b). Compliance will be judged on whether the licensee has incorporated measures to track and, if necessary, to reduce exposures (e.g., whether the findings indicate an ALARA program breakdown).

(2) Is the finding associated with or impact any key attribute of the Security cornerstone to meet its intended function whether in performance, design or implementation?

## CORNERSTONE OBJECTIVES AND ATTRIBUTES

(related to Section 3, Minor Questions)

**Cornerstone:** REACTOR SAFETY / Initiating Events

Objective: to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations.

| Attributes: | Examples: |
|---|---|
| Design Control: | Initial Design and Plant Modifications |
| Protection Against External Factors: | Flood Hazard, Fire, Loss of Heat Sink, Toxic Hazard, Switchyard Activities, Grid Stability |
| Configuration Control: | Shutdown Equipment Lineup, Operating Equipment lineup, |
| Equipment Performance: | Availability, Reliability, Maintenance; Barrier Integrity (SGTR, ISLOCA, LOCA (S,M,L), Refueling/Fuel Handling Equipment |
| Procedure Quality: | Procedure Adequacy |
| Human Performance: | Human Error |

**Cornerstone:** REACTOR SAFETY / Mitigating Systems

Objective: to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage).

| Attributes: | Examples: |
|---|---|
| Design Control: | Initial Design and Plant Modifications |
| Protection Against External Factors: | Flood Hazard, Fire, Loss of Heat Sink, Toxic Hazard, Seismic |
| Configuration Control: | Shutdown Equipment Lineup, Operating Equipment Lineup, |
| Equipment Performance: | Availability, Reliability |
| Procedure Quality: | Operating (Post Event) Procedure (AOPs, SOPs, EOPs); Maintenance and Testing (Pre-event) Procedures |
| Human Performance: | Human Error (Post Event), Human Error (Pre-event) |

**Cornerstone:** REACTOR SAFETY / Barrier Integrity

Objective: to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radio nuclide releases caused by accidents or events.

| Attributes: (Maintain Functionality of Fuel Cladding) | Examples: |
|---|---|
| Design Control: | Physics Testing; Core Design Analysis (Thermal limits, Core Operating Limit Report, Reload Analysis, 10 CFR50.46) |
| Configuration Control: | Reactivity Control (Control Rod Position, Reactor Manipulation, Reactor Control Systems); Primary Chemistry Control; Core Configuration (loading) |
| Cladding Performance: | Loose Parts (Common Cause Issues); RCS Activity Level |
| Procedure Quality: | Procedures which could impact cladding |
| Human Performance: | Procedure Adherence (FME, Core Loading, Physics Testing, Vessel; Assembly, Chemistry, Reactor Manipulation); FME Loose Parts, Common Cause Issues |

| Attributes: (Maintain functionality of RCS ) | Examples: |
|---|---|
| Design Control: | Plant Modifications |
| Configuration Control: | System Alignment; Primary Secondary Chemistry |
| RCS Equipment and Barrier Performance: | RCS Leakage; Active Components of Boundary(valves, seals); ISI Results |
| Procedure Quality: | Routine OPS/Maintenance procedures; EOPs and related Normal Procedures invoked by EOPs |
| Human Performance: | Routine OPS/Maintenance Performance; Post Accident or Event Performance |

| Attributes: (Maintain Functionality of Containment) | Examples: |
|---|---|
| Design Control: | Plant Modifications; Structural Integrity; Operational Capability |
| Configuration Control: | Containment Boundary Preserved; Containment Design Parameters Maintained |
| SSC and Barrier Performance: | S/G Tube Integrity, ISLOCA Prevention; Containment Isolation SSC Reliability /Availability, Risk Important Systems Function |
| Procedure Quality: | Emergency Operating Procedures; Risk Important Procedures (OPS, Maintenance, Surveillance) |
| Human Performance: | Post Accident or Event Performance; Routine OPS/Maintenance Performance |

| Attributes: | Examples: |
|---|---|
| (Maintain Radiological Barrier Functionality of Control Room and Auxiliary Building - PWR, and Standby Gas Trains - BWR only) | |
| Design Control: | Plant Modifications; Structural Integrity |
| Configuration Control: | Building Boundaries Preserved |
| SSC and Barrier Performance: | Door, Dampers, Fans, Seals, Instrumentation |
| Procedure Quality: | EOPs, Abnormal and Routine Operating Procedures, Surveillance Instructions, Maintenance Procedures |
| Human Performance: | Post Accident or Event performance; Routine OPS/Maintenance Performance |

| Attributes: | Examples: |
|---|---|
| (Maintain Functionality of Spent Fuel Pool Cooling System) | |
| Design Control | Plant Modifications; Structural Integrity |
| Configuration Control: | System Alignment |
| SSC Performance: | Pumps, Valves, Instrumentation |
| Procedure Quality: | EOPs, Abnormal and Routine Operating Procedures, Surveillance Instructions, Maintenance Procedures |
| Human Performance: | Post Accident or Event Performance; Routine OPS/Maintenance Performance |

**Cornerstone:** REACTOR SAFETY / Emergency Preparedness

Objective: To ensure that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency.

| Attributes: | Examples: |
|---|---|
| ERO Readiness: | Duty Roster; ERO Augmentation System; ERO Augmentation Testing; Training |
| Facilities and Equipment: | ANS Testing; Maintenance Surveillance and Testing of Facilities, Equipment and Communications Systems; Availability of ANS, Use in Drills and Exercises. |
| Procedure Quality: | EAL Changes, Plan Changes; Use in Drills and Exercises; |
| RO Performance: | Program Elements Meet 50.47(b) Planning Standards, Actual Event Response; Training, Drills, Exercises |
| Offsite EP: | FEMA Evaluation |

**Cornerstone**: RADIATION SAFETY / Occupational Radiation Safety

Objective: to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation.

| Attributes: | Examples: |
|---|---|
| Plant Facilities/Equipment and Instrumentation: | Plant Equipment, ARM Cals & Availability, Source Term Control; Procedures (Radiation and Maintenance) |
| Program & Process: | Procedures (HPT, Rad Worker, ALARA); Exposure/Contamination Control and Monitoring (Monitoring and RP Controls); ALARA Planning (Management Goals, Measures - Projected Dose) |
| Human Performance: | Training (Contractor HPT Quals, Radiation Worker Training, Proficiency) |

**Cornerstone:** RADIATION SAFETY / Public Radiation Safety

Objective: to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation.

| Attributes: | Examples: |
|---|---|
| Plant Facilities/Equipment and Instrumentation: | Process Radiation Monitors (RMS) (Modifications, Calibrations, Reliability, Availability), REMP Equipment, Meteorology Equipment, Transportation Packaging; Procedures (Design/Modifications, Equipment Calculations, Transportation Packages, Counting Labs) |
| Program & Process: | Procedures; (Process RMS &REMP, Effluent Measurement OC, Transportation Program, Material Release, Meteorological Program, Dose Estimates); Exposure and Radioactivity Material Monitoring and Control (Projected Offsite Dose, Abnormal Release, DOT Package Radiation Limits, Measured Dose) |
| Human Performance: | Training (Technician Qualifications, Radiation & Chemical Technician Performance. |

**Cornerstone:** SAFEGUARDS / Security

Objective: to provide assurance that the licensee's security system and material control and accountability program use a defense-in-depth approach and can protect against (1) the design basis threat of radiological sabotage from external and internal threats, and (2) the theft or loss of radiological materials

| Attributes: | Examples: |
|---|---|
| Physical Protection System: | Protected Areas (Barriers and Alarms, Assessment); Vital Areas (Barriers and Alarms, Assessment) |
| Access Authorization System: | Personnel Screening; Behavior Observations; Fitness for Duty |
| Access Control System: | Search; Identification |
| Response to Contingency Events: | Protective Strategy; Implementation of Protective Strategy |